REMARKS:

Thank you for the courtesy of interview extended to Applicants of the above-identified case on April 12, 2005. As we discussed during the interview, I have further reviewed Brief et al. (6,122,676). Here are my comments on the disclosure of Brief et al.

Brief et al. discloses an allocation between the endpoints and the endpoint pipes. An endpoint is the ultimate source of data. (col. 2, line 10). One knows that a USB has a plurality of endpoints connectable to devices. An endpoint pipe provides for the movement of data between the USB and memory, and completes the path between the USB Host and the function endpoint. (col. 2, lines 10-13). Therefore, according to Brief et al., an endpoint pipe is a path created between the host and a particular endpoint.

In Brief et al., the endpoint controller 202 provides a mapping from the functional address, token type (IN, OUT, Setup), and endpoint number to one of the endpoint pipes. (col. 6, lines 59-61). The host controller 102 may control the setting of the pipe map select bits. (col. 6, lines 65-67). The endpoint controller 202 uses a token packet to generate a byte-wide pipe map index 300 which is shown in Fig. 3. (col. 7, lines 1-3). Upon receipt of a token packet, the endpoint controller 202 generates the pipe map index 300. The endpoint controller 202 then accesses the endpoint pipe map select bits to select the appropriate mapping for the token. (col. 7, lines 9-12). By changing the endpoint pipe select bit, the host controller 102 can change the mapping of endpoint pipes across functions. (col. 7, 19-28). Figs. 4 and 5 of Brief et al. show an allocation between the endpoint pipes and the endpoints. Thus, Brief et al. discloses dynamic allocation between the endpoints pipes and the endpoints.

However, Brief et al. is silent about dynamic allocation between the endpoints and the devices connected thereto. Brief et al. does not distinguish between the endpoints and the devices because the devices are fixedly connected to the endpoints.

In contrast, the present invention is directed to dynamic allocation between the endpoints and the devices. Below are current claims 9 and 18, which we discussed during the interview. I would like to call the Examiner's attention to the underlined portions of the claims.

9. A mobile device that provides multiple functionalities for a host computer through USB communication, comprising:

a plurality of logical devices that provide different functionalities and are all recognizable under one USB address by the host computer;

a USB that comprises multiple endpoints which collectively provide multiple data transfer functionalities and at least some of which are reconfigurable to provide different data communication capabilities for the logical devices;

a device selector that, in response to a service request from the host computer, dynamically connects one or more endpoints to a logical device adapted to provide the requested service; and

an endpoint configurator that reconfigures, if necessary, some of the one or more endpoints to effect data communication between the host computer and the selected logical device.

18. A method for providing different functionalities to a host computer through a USB, comprising the steps of:

providing a mobile device with a plurality of logical devices that provide different functionalities and are all recognizable under one USB address by the host computer, wherein the mobile device is connected to the host computer;

notifying the host computer of configurations of the logical devices through a USB that comprises multiple endpoints which collectively provide multiple data transfer functionalities and at least some of which are reconfigurable to provide different data communication capabilities for the logical devices;

receiving a service request from the host computer through the USB;

dynamically connecting one or more endpoints to a logical device adapted to provide the request service; and

reconfiguring, if necessary, some of the one or more endpoints to effect data communication between the host computer and the selected logical device.

Respectfully submitted,

Date: June 9, 2005

Tadashi Horie
Registration No. 40,437
Attorney for Applicant(s)

BRINKS HOFER GILSON & LIONE
P.O. Box 10395
Chicago, IL 60610
(312) 321-4200